IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent:

	6,973,099	)
		)
Issue Date:	12/06/2005	)
		)
Serial No.:	09/745,655	)
		)
Filed:	December 22, 2000	)

Confirmation: 1814
Art Unit: 2666
Examiner: R.C. Schiebel
Docket No. AMCC4840

For: **SYSTEM AND METHOD FOR PROGRAMMING THE VALUE OF FRAME SYNCHRONIZATION WORDS IN A MULTIDIMENSIONAL DIGITAL FRAME STRUCTURE**

MAIL STOP: REQUEST FOR CERTIFICATE OF CORRECTION
Commissioner for Patents
P. O. Box 1450
Alexandria, VA. 22313-1450

Certificate
FEB 1 0 2006
of Correction

SECOND REQUEST FOR CERTIFICATE OF CORRECTION

APPLIED MICRO CIRCUITS CORPORATION, the Assignee of the referenced patent, hereby requests that a Certificate of Correction be issued to add references cited by the Examiner in an Office Action dated 06/15/2004 ("the Office Action"). Attached to this paper is a copy of the denial of the Request for Certificate of Correction submitted December 23, 2005, along with a copy of the Office Action.

Note that, on the PTOL-326 of the Office Action, Box Number 1 (Notice of References Cited PTO-892) is checked, and that the PTO-892 appears in two places in the Office Action. Inclusion of two copies of the PTO-892 in the Office Action suggests that the Patent Office's copy of the PTO-892 was inadvertently attached to the Office Action when mailed to the applicants' representative, and for this reason is absent from the file of the patent application. In any event, as the Office Action copy establishes, the examiner did prepare the PTO-892, and did forward the document to the applicant's representative.

FEB 13 2006

Further confirmation that the examiner completed and forwarded the PTO-892 is found in the Office Action itself. For example, in the Detailed Action section of the Office Action, the examiner references US Patent 6,445,719 of Schneider, US Patent 6,400,734 of Weigand, US Patent 5,646,947 of Cooper, and US Patent 5,982,830 of Maturi to support rejections. The examiner also references US Patents 5,896,426; 5,987,038; 5,550,833; 5,898,743; 4,575,864; and 4,298,987 in the Conclusion of the Office Action. None of these patents was disclosed by the applicants, but all are listed in the PTO-892.

Accordingly, the PTO-892 was completed by the examiner, and all of its listed references were cited and referenced by the examiner in determining patentability. Therefore, the references should be of record in the file of the application and on the face of the above-identified patent. This is a Patent Office error and the undersigned believes no fee is required.

Respectfully submitted,

Date: February 3, 2006

TERRANCE A. MEADOR
Reg. No. 30, 298

INCAPLAW
1050 Rosecrans Street, Suite K
San Diego, CA 92106
Telephone: (619) 222-2531   Fax: (619) 222-2327

FEB 13 2006

UNITED STATES DEPARTMENT OF COMMERCE
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

REC'D JAN 1 9 2006

Date	: 1/12/2006
Patent No.	: 6,973,099 B1
Inventor(s)	: Bendek et al.
Issue Date	: December 6, 2005
Title	: SYSTEM AND METHOD FOR PROGRAMMING THE VALUE OF FRAME SYNCHRONIZATION WORDS IN A MULTIDIMENSIONAL DIGITAL FRAME STRUCTURE
Doc./File No.	: AMCC4840 C/M # 103747-165

Re: Consideration for Certificate of Correction

Consideration has been given your request for the issuance of a certificate of correction for the above-identified patent under the provisions of Rule 1.322.

Respecting the alleged error in your request, inspection of the file of the application for the patent reveals , the patent is printed in accordance with the record, since there is no record of a 1449 or 892 with reference(s) considered by the Examiner.

In view of the foregoing, your request in this matter is denied. However, further consideration will be given your request in this matter upon receipt of a copy of the 1449 or 892 with the requested reference(s) considered by the Examiner.

Further consideration will be given concerning the matter of denials upon receipt of a request for **Reconsideration** (reconsideration should be accompanied by supporting document(s) such as, amendment, postcard receipt, 1449/892, etc.) and should be filed and directed to Decisions & Certificates of Correction Branch with the appropriate fee of 100.00.

Ernest C. White, *LIE* (703) 308-9390 ext.#122
Cecelia B. Newman, *Supervisor* (703) 308-9390 ext. #101
Decisions & Certificates of Correction Branch

Terrance A. Meador
INCAPLAW
1050 Rosecrans Street, Suite K
San Diego CA 92106

ecw

RECEIVED

JUN 2 1 2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,655	12/22/2000	George Beshara Bendak	AMCC4840 C/M # 103747-165	1814

			EXAMINER
25548	7590	06/15/2004	SCHEIBEL, ROBERT C

MARK M. TAKAHASHI
GRAY CARY WARE & FREIDENRICH, LLP
4365 EXECUTIVE DRIVE, SUITE 1100
SAN DIEGO, CA 92121-2133
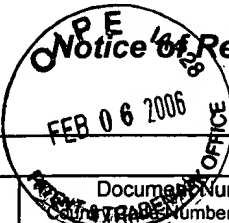
ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED

JUN 2 4 2004

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,445,719 B1	09-2002	Schneider et al.	370/506
	B	US-6,400,734 B1	06-2002	Weigand, David L.	370/514
	C	US-5,646,947	07-1997	Cooper et al.	370/510
	D	US-5,982,830 A	11-1999	Maturi et al.	375/366
	E	US-5,896,426	04-1999	Ramamurthy et al.	375/368
	F	US-5,987,038 A	11-1999	Staszewski et al.	370/514
	G	US-5,550,833 A	08-1996	Fujisawa, Yukio	370/514
	H	US-5,898,743 A	04-1999	Shoji et al.	370/514
	I	US-4,575,864	03-1986	Rice et al.	375/368
	J	US-4,298,987	11-1981	Stattel et al.	375/368
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Please type a plus sign (+) inside the box ⊠

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-003
U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Action of 1995, no persons are required to response to a collection of information unless it contains a valid OMB number.

Substitute for form 1449A/PTO	COMPLETE IF KNOWN	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets necessary)*	Application Number	Unknown
	Filing Date	Herewith
	First Named Inventor	G. Bendak
	Group Art Unit	Unknown
	Examiner Name	Unknown
SHEET ___ OF ___	Docket Number	AMCC4840

U.S. PATENT DOCUMENTS
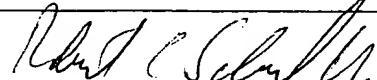
Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (If known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
RCS		5,251,205		Callon et al.	10-05-1993	
RCS		5,490,252		Macera et al.	02-06-1996	
RCS		5,568,471		Hershey et al.	10-22-1996	
RCS		5,661,763		Sands	08-26-1997	
RCS		5,666,108		Duffy	09-09-1997	
RCS		5,778,000		Dosiere et al.	07-07-1998	
RCS		5,793,976		Chen et al.	08-11-1998	
RCS		5,854,699		Olshansky	12-29-1998	
RCS		5,875,396		Stockton et al.	02-23-1999	
RCS		5,982,743		Kusano	11-09-1999	
RCS		6,006,069		Langston	12-21-1999	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (If known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[6]

Examiner Signature	*[signature]*	Date Considered	6-8-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two letter-code (WIPO Standart ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO' Standard St. 16 if possible. [6]Applicant is to place a check mark here if English language translation is attached.
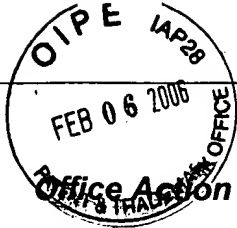
	Application No.	**Applicant(s)**
***Office Action** Summary*	09/745,655	BENDAK ET AL.
	Examiner	**Art Unit**
	Robert C. Scheibel	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 February 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-63</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-25, 27-35 and 37-63</u> is/are rejected.

7)☒ Claim(s) <u>26 and 36</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 December 2000</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to because in Figure 1, the significance numbers in the bottom left corner (134➔116, 132➔114) is not explained in the specification. It appears that these notations should be removed from the drawings. Another way to overcome this objection is to explain the significance of these notations in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: 136 (line 5 on page 16). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4.   The disclosure is objected to because of the following informalities: the number

"132" in line 10 of page 14 appears to be incorrect. 132 appears only in the lower left

corner of Figure 1 (see objection to drawings above); it appears that the specification

should refer to item 130 as this indicates the location of the FSBs in Figure 1.

Appropriate correction is required.

Claim Objections

5.   Claims 1-3, 16 and 36 are objected to because of the following informalities:

- The phrase "defining a frame" in line 4 of claim 1 and line 1 of claim 3 and the

  phrase "defining the frame" in line 1 of claim 2 should be consistent. Either

  claims 1 and 3 or claim 2 should be changed to make the wording consistent.

- "byte" in line 2 of claim 16 should be changed to "bytes".

- "fame" in line 3 of claim 36 should be changed to "frame".

  Appropriate correction is required.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

7.   Claims **1-7, 15-20, 22-25, 38-41, 45-52, 58-60, and 63** are rejected under 35

U.S.C. 102(b) as being anticipated by U.S. Patent 6,445,719 to Schneider et al.

Regarding claim **1**, Schneider discloses the step of defining a frame with an overhead section having a predetermined number of bytes in lines 30-36 of column 1. Schneider discloses the step of selecting the values of the bytes in the overhead section to be used for frame synchronization in step 720 and 725 of Figure 7 which use FSW values selected from the values in Figure 5.

Regarding claim **18**, Schneider discloses the step of selecting the values of frame synchronization bytes in the FSW values selected in Figure 5. Schneider discloses the steps of sending the frame and receiving the frame are disclosed in Figure 6 and the associated description (see lines 61-64 of column 6, for example). Schneider discloses the step of synchronizing the received frame in response to recognizing the frame synchronization bytes in the deframer of Figure 6 and in the passage from line 64 of column 6 through line 5 of column 7.

Regarding claims **38 and 47**, Schneider discloses the limitations of an overhead generator/receiver and a payload generator/receiver in elements 102 and 104 of Figure 6 and step 730 of Figure 7. As indicated in lines 13-29 of column 4, the receiver performs the inverse operations of the transmitter, thus the overhead generator and payload generator have an analogous overhead and payload receiver in the receiving device. The limitation of the encoder providing FEC for the frame is disclosed by Schneider in lines 37-39 of column 4 which indicate that the overhead bits are used for error correction (of which FEC is a well known type). Schneider discloses the limitation of the overhead generator having an input to select a frame synchronization byte value in steps 720 and 725 of Figure 7.

Regarding claim **63**, Schneider discloses the limitations of a transmitter with a frame generator including an overhead generator and a receiver with a frame receiver including an overhead receiver in devices 102 and 104, respectively, of Figure 6. As indicated in the rejection above, step 730 of Figure 7 discloses the transmitter portion and the passage from lines 13-29 of column 4 indicates that the receiver performs the inverse operations and thus has a frame receiver including an overhead receiver. The limitation of accepting a command to select the value of the frame synchronization bytes in the transmitter is disclosed in step 725 of Figure 7. The limitation of the receiver accepting commands to select the value of the frame synchronization bits is disclosed in step 825 of Figure 8. As indicated in lines 30-34 of column 7 the synchronization word is preferably selected from the list in Figure 5. The limitation of the overhead receiver synchronizing the frame in response to recognizing the frame synchronization byte values is disclosed in steps 830-840 of Figure 8 and described in lines 34-36 of column 3.

Regarding claim **2**, with the limitations of parent claim 1 addressed above, Schneider discloses the limitation of defining the frame including defining the overhead section having a first plurality of overhead byte locations in the Figures 3 and 4. The locations of the AFSW, FSW, and other overhead bytes are the plurality of overhead byte locations. Schneider discloses the limitation of selecting the value of the frame synchronization bytes from a first plurality of byte values in the selection of one of the values in Figure 5.

Regarding claim **3**, Schneider discloses the limitation of defining the frame including defining each frame synchronization byte having a second plurality of bits in Figure 5 which indicates that the FSWs are defined by a plurality of bits. The limitation of selecting the value of synchronization bytes including selecting a second plurality of bits is disclosed in selecting one of the values from this table as the synchronization word, thus selecting a plurality of bits.

Regarding claim **4**, Schneider discloses the limitation that the selection of the frame synchronization bytes included selecting a plurality of frame synchronization byte values in Figure 5. One row is selected in each case, the row comprised of a plurality of byte values in the 2 columns shown in Figure 5.

Regarding claim **5**, the limitation that the selection of synchronization bytes includes selecting first and second values in Figure 5. The 2 columns represent the first and second values.

Regarding claim **6**, the limitation of selecting a quantity of bytes in the overhead section to be used for frame synchronization is disclosed in Figure 5, where the quantity selected is 2.

Regarding claim **7**, the limitation of defining the frame including defining the overhead section is disclosed in Figures 3 and 4 which indicate the overhead section of the frame. The overhead section comprises the AFSW, FSW, and the "overhead" parts of element 304. The limitation that selecting the quantity of bytes in the overhead section includes selecting a number of bytes in the range of the overhead bytes is disclosed in the AFSW and FSW fields being part of the overhead. The limitation of

selecting the value including selecting a first number of byte values is disclosed in

selecting a row of values for the AFSW and FSW fields from the values listed in Figure

5.

Regarding claim **15**, the limitation of selecting the location of the frame

synchronization bytes is disclosed in Figures 3 and 4 which show the selected location

of the synchronization words.

Regarding claims **16 and 17**, the limitation that selecting the location of frame

synchronization bytes includes selecting synchronization bytes having a first and

second value in respective first and second locations in Figures 4 and 5. The first

column of Figure 5 has a first value as indicated, and has a first location (as indicated in

AFSW in Figure 4). Similarly, the second column has a second value and second

location (FSW).

Regarding claim **19**, with the limitation of parent claim 18 addressed above, the

limitation of selecting the values of the frame synchronization bytes in step 720 and 725

of Figure 7 which use FSW values selected from the values in Figure 5. Schneider

discloses the limitation of synchronizing the received frames included synchronizing in

response to recognizing the synchronization byte value in the received frames in steps

830-840 of Figure 8 and described in lines 34-36 of column 3.

Regarding claim **20**, the limitation of selecting a first frame synchronization byte

value is disclosed in step 720 and 725 of Figure 7 which use FSW values selected from

the values in Figure 5. The limitation of synchronizing the received frames included

synchronizing in response to recognizing the first synchronization byte value in the received frames in steps 830-840 of Figure 8 and described in lines 34-36 of column 3.

Regarding claims **22 and 23**, the limitation of selecting the location of the frame synchronization byte values in the transmitted frame is disclosed in Figures 3 and 4 which show the selected location of the synchronization words. The same locations are used by the receiver in the received frames received by device 104 of Figure 6.

Regarding claim **24 and 25**, Schneider discloses the limitation of selecting the location of the frame synchronization byte values in a transmitted frame includes selecting a first location for a first value and a second location for a second value in Figures 4 and 5. The first column of Figure 5 has a first value as indicated, and has a first location (as indicated in AFSW in Figure 4). Similarly, the second column has a second value and second location (FSW). The limitation that the synchronizing of the received frame includes synchronizing in response to recognizing the first and second values in the first and second locations is disclosed in steps 830-840 of Figure 8 and described in lines 34-36 of column 3.

Regarding claim **39**, the limitation that the frame generator supplies a frame with a first plurality of overhead bytes is disclosed in the framer 610 of device 102 of Figure 6. The framer generates frames as described in Figures 3 and 4 which have a plurality of overhead bytes. The limitation that the overhead generator accepts commands to select frame synchronization byte values for each frame is disclosed in the selection of one of the values in Figure 5.

Regarding claim **40**, the limitation that the overhead generator selects a second

plurality of bits for each frame synchronization byte value is disclosed in Figure 5 which

indicates that the FSWs are defined by a plurality of bits. The limitation of selecting the

value of synchronization bytes including selecting a second plurality of bits is disclosed

in selecting one of the values from this table as the synchronization word, thus selecting

a plurality of bits.

Regarding claim **41**, the limitation that the overhead generator selects values

from a plurality of byte values is disclosed in the plurality of values of Figure 5.

Regarding claim **45**, the limitation that the overhead generator selects the

location of the frame synchronization byte values is disclosed in Figure 4; the overhead

generator must select the locations indicated by AFSW and FSW to correctly populate

the overhead region.

Regarding claim **46**, the limitation that the overhead generator selects first and

second values in first and second locations is disclosed in Figures 4 and 5. The first

column of Figure 5 has a first value as indicated, and has a first location (as indicated in

AFSW in Figure 4). Similarly, the second column has a second value and second

location (FSW).

Regarding claim **48**, the limitation that the overhead receiver selects a second

plurality of bits for each frame synchronization byte value is disclosed in Figure 5 which

indicates that the FSWs are defined by a plurality of bits. The limitation of selecting the

value of synchronization bytes including selecting a second plurality of bits is disclosed

in selecting one of the values from this table as the synchronization word, thus selecting

a plurality of bits.

Regarding claim **49**, the limitation that the overhead receiver selects values from

a plurality of byte values is disclosed in the plurality of values of Figure 5.

Regarding claims **50 and 52**, the limitation that the frame receiver supplies a

frame with a first plurality of overhead section bytes is disclosed in the de-framer 624 of

device 104 in Figure 6. The de-framer receives frames as described in Figures 3 and 4

which have a plurality of overhead bytes. The limitation that the overhead receiver

selects frame synchronization byte values for each frame is disclosed in the selection of

one of the values in Figure 5.

Regarding claim **51**, the limitation that the overhead selects first and second

synchronization bytes having first and second values is disclosed in Figures 4 and 5.

The first column of Figure 5 has a first value as indicated, and has a first location (as

indicated in AFSW in Figure 4). Similarly, the second column has a second value and

second location (FSW).

Regarding claims **58-60**, the limitation that the overhead receiver selects

locations for the frame synchronization byte values is disclosed in Figure 4 and Figure

8; the overhead receiver must select the locations indicated by AFSW and FSW to

correctly extract the overhead region and perform the synchronization as indicated in

Figure 8. The AFSW location and value are the first location and value of claim 59.

These same locations are selected in consecutive frames (first and second frames),

thus disclosing the limitations of claim 60.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

10.   Claims **12-14, 27-29, and 56-57** are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,445,719 to Schneider et al in view of U.S. Patent

6,400,734 to Weigand.

      Regarding claims **12-14, 27-29, and 56-57**, Schneider discloses all the limitations

of the parent claims 1, 18, and 47 as addressed above.

      Schneider does not disclose expressly the limitation of selecting the bit error rate

of the frame synchronization values(claims 12, 27, and 56), the limitation of this

selecting including an average bit error rate (claims 13, 28, and 57), or the limitation of

the selecting of frame synchronization byte values including selecting a frame

synchronization value with a selected bit error rate (claim 14), or the limitation of

synchronizing including recognizing frame synchronization byte values having a bit error

rate of less than or equal to the selected rate (claim 29).

Weigand discloses the limitation of claims **12, 27, and 56** of selecting the bit error

rate of the frame synchronization values in lines 28-37 of column 3. The limitation of

claim **14** that the selecting of synchronization byte values includes selecting a value with

a selected bit error rate is disclosed by the same passage as it is clear that the selection

of the bit error rate would be based on the value of the word selected. The bit error rate

of Weigand is an average bit error rate; line 3 of column 3 indicates that one un-

matched bit is an error, and the number of errors is computed over multiple bits during

the correlation (see lines 45-67 of column 12). This is thus an average number of bit

errors (number of bit errors within the total number of bits used during correlation). This

discloses the limitation of claims **13, 28, and 57** of the selecting of bit error rate

including selecting an average bit error rate value. Further, Weigand discloses the

limitation of claim **29** of synchronizing the received frame in response to recognizing the

frame synchronization byte values includes recognizing frame synchronization byte

values having a bit error rate less than, or equal to, the selected frame synchronization

bit error rates in lines 54-67 of column 12.

Schneider and Weigand are analogous art because they are from same field of

endeavor of synchronization using unique words in a digital communication system.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Schneider by adding the capability of dynamically selecting the allowable error rate for the synchronization word as taught by Weigand.

The motivation for doing so would have been to allow synchronization to occur even in adverse environmental conditions as suggested in the passage from line 60 of column 2 through line 3 of column 3.

Therefore, it would have been obvious to combine Weigand with Schneider for the benefit of synchronizing during adverse conditions to obtain the invention as specified in claims 12-14, 27-29, and 56-57.

11.   Claims **8-11, 30-35, 42-44, 53-55** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,445,719 to Schneider et al in view of U.S. Patent 5,646,947 to Cooper et al.

Regarding claims **8-11, 30-36, 42-44, and 53-55**, Schneider discloses all the limitations of the parent claims 1, 18, 38, and 47 as stated above.

Schneider does not disclose expressly disclose the limitations of claims 8-11, 30, 32-36, 42, 44, and 53, 55 regarding the superframe structure and related synchronization.

Regarding claims **8, 42, and 53**, Cooper discloses the limitation of defining a superframe structure with a predetermined number of frames per superframe in lines 39-41 of column 4 and figure 2. Cooper discloses the limitations of wherein selecting the values of frame synchronization bytes in the overhead section includes selecting the

values of bytes in the overhead section of each frame in lines 13-26 of column 4. This

passage indicates that the unique word values are used by the receiver to lock to the

frames and superframes; these unique words for each frame must be selected prior to

being used. Regarding claim **30**, Cooper discloses the limitation of defining a

superframe structure and the limitation of setting the values of the frame

synchronization bytes including selecting byte values to be used for synchronization in

each frame of the super frame in the passages and figures cited above with regard to

claims 8, 42, and 53. Cooper further discloses the limitation of sending the frame

including sending the frames in the superframe structure in figure 2. Cooper also

discloses the limitation of synchronizing in response to recognizing the frame

synchronization bytes included in each frame of the superframe in lines 13-26 of column

4.

Schneider and Cooper are analogous art because they are from same field of

endeavor of frame synchronization.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to modify Schneider to add support for a superframe structure as specified

in Cooper. The motivation for doing so would have been to improve processor

throughput as suggested in lines 48-51 of column 17.

Therefore, it would have been obvious to combine Cooper with Schneider for the

benefit of improved processor throughput to obtain the invention as specified in claims

8, 30, 42, and 53.

Regarding claims **31, 43, and 54**, Schneider discloses the limitation of selecting a quantity of bytes in the overhead section to be used for frame synchronization in Figure 5, where the quantity selected is 2.

Regarding claim **32 and 33**, with the limitations of the parent claim 31 addressed above, Schneider discloses the limitation of selecting a quantity of bytes in the overhead section to be used for frame synchronization in Figure 5, where the quantity selected is 2. The limitation that wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes recognizing the selected quantity of frame synchronization byte values in each frame of the superframe is disclosed inherently in that both synchronization bytes must be recognized in order to properly synchronize the stream in Schneider.

Regarding claim **35**, Schneider discloses the limitation of selecting a quantity of bytes in the overhead section to be used for frame synchronization in Figure 5, where the quantity selected is 2.

Regarding claims **9-11, 34, 44, and 55**, Schneider fails to disclose expressly the limitations of these claims. Cooper discloses the limitation of a first frame and a second frame in the superframe and selecting first and second values for each of these 2 frames in lines 13-29 of column 2 and in the UWs of figure 2. Cooper also discloses the limitation of the superframe structure containing a first, second, third, and forth frame and these frames including a first, second, third, and forth values in figure 2. These values can be any unique value including zero. Schneider and Cooper are analogous art because they are from same field of endeavor of frame synchronization. At the time

of the invention it would have been obvious to a person of ordinary skill in the art to modify Schneider to add support for a superframe structure as specified in Cooper. The motivation for doing so would have been to improve processor throughput as suggested in lines 48-51 of column 17. Therefore, it would have been obvious to combine Cooper with Schneider for the benefit of improved processor throughput to obtain the invention as specified in claims 9-10, 34, 44, and 55.

12.   Claims **21, 37, and 61-62** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,445,719 to Schneider et al in view of U.S. Patent 5,982,830 to Maturi et al.

Schneider discloses all the limitations of the parent claims 19 and 47 as described above.

Schneider does not disclose expressly the details of the synchronization described in claims 21, 37, and 61-62.

Maturi discloses the limitations of claims 21 and 61 regarding selecting the number of consecutive frames to be recognized in lines 49-51 of column 3. Maturi discloses the limitation of claims 37 and 62 regarding falling out of synchronization based on a number of consecutive frames in which the synchronization word is not detected in lines 5-9 of column 4. Schneider and Maturi are analogous art because they are from same field of endeavor of frame synchronization. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Schneider by adding the hysteresis scheme of Maturi described in the passages above.

The motivation for doing so would have been to improve robustness by preventing false detection of the synchronization word and avoiding falling out of synchronization due to a small amount of errors. Therefore, it would have been obvious to combine Maturi with Schneider for the benefit of improving the robustness of the synchronization to obtain the invention as specified in claim 21, 37, and 61-62.

Allowable Subject Matter

13.   Claims **26 and 36** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,896,426 to Ramamurthy et al discloses a method of dynamically changing the synchronization word. U.S. Patents 5,987,038, 5,550,833, 5,898,743, 4,575,864 and 4,298,987 all disclose methods of programming the unique synchronization word similar to some parts of the disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 703-305-9062. The examiner can normally be reached on 6:30-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Seema S. Rao can be reached on 703-308-5463. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

*
RCS   6-8-04*
Robert C. Scheibel
Examiner
Art Unit 2666

DANG TON
PRIMARY EXAMINER

Notice of References Cited
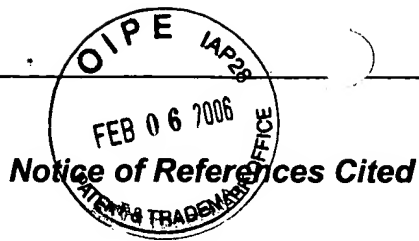
Application/Control No.	Applicant(s)/Patent Under Reexamination
09/745,655	BENDAK ET AL.
Examiner	Art Unit	
Robert C. Scheibel	2666	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,445,719 B1	09-2002	Schneider et al.	370/506
	B	US-6,400,734 B1	06-2002	Weigand, David L.	370/514
	C	US-5,646,947	07-1997	Cooper et al.	370/510
	D	US-5,982,830 A	11-1999	Maturi et al.	375/366
	E	US-5,896,426	04-1999	Ramamurthy et al.	375/368
	F	US-5,987,038 A	11-1999	Staszewski et al.	370/514
	G	US-5,550,833 A	08-1996	Fujisawa, Yukio	370/514
	H	US-5,898,743 A	04-1999	Shoji et al.	370/514
	I	US-4,575,864	03-1986	Rice et al.	375/368
	J	US-4,298,987	11-1981	Stattel et al.	375/368
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.